We claim:-

1. A radiation-curable urethane (meth)acrylate obtainable by the steps comprising

a) partly reacting an alkoxylated polyol (A) with (meth)acrylic acid (B) in the presence of at least one esterification catalyst (C) and at least one polymerization inhibitor (D) and also if desired a solvent (E) that forms an azeotrope with water,

b) removing if desired at least some of the water formed in a) from the reaction mixture which can be done during and/or after a),

f) neutralizing if desired the reaction mixture,

h) removing if desired any solvent (E) used by distillation and/or

i) stripping if desired with a gas which is inert under the reaction conditions and removing if desired excess acrylic acid by distilling,

k) reacting the reaction mixture obtained after the last of the above steps with a compound (G) containing at least two epoxy groups in the presence if desired of a catalyst (H), and

l) reacting the reaction mixture from k) with at least one polyisocyanate (J) and at least one hydroxyalkyl(meth)acrylate (K) and if desired with at least one further compound (M) containing one or more isocyanate-reactive groups in the presence if desired of a catalyst (L).

2. A process for preparing a radiation-curable urethane (meth)acrylate obtainable by the steps comprising

a) partly reacting an alkoxylated polyol (A) with (meth)acrylic acid (B) in the presence of at least one esterification catalyst (C) and at least one polymerization inhibitor (D) and also if desired a solvent (E) that forms an azeotrope with water,

b) removing if desired at least some of the water formed in a) from the reaction mixture which can be done during and/or after a),

f) neutralizing if desired the reaction mixture,

h) removing if desired any solvent (E) used by distillation and/or

i) stripping if desired with a gas which is inert under the reaction conditions and removing if desired excess acrylic acid by distilling,

k) reacting the reaction mixture obtained after the last of the above steps with a compound (G) containing at least two epoxy groups in the presence if desired of a catalyst (H), and

l) reacting the reaction mixture from k) with at least one polyisocyanate (J) and at least one hydroxyalkyl(meth)acrylate (K) and if desired with at least one further compound (M) containing one or more isocyanate-reactive groups in the presence if desired of a catalyst (L).

3. A radiation-curable urethane (meth)acrylate or process as claimed in either of the above claims, wherein the reaction mixture used in k) has an acid number to DIN EN 3682 of up to 200 mg KOH/g and an OH number to DIN 53240 of up to 120 mg KOH/g.

4. A radiation-curable urethane (meth)acrylate or process as claimed in any one of the above claims, wherein the reaction mixture used in l) has an OH number to DIN 53240 of up to 250 mg KOH/g.

5. A radiation-curable urethane (meth)acrylate or process as claimed in any one of the above claims, wherein the polyol (A) is a pentaerythritol, trimethylolethane or trimethylolpropane with from single to 20-fold ethoxylation.

6. A radiation-curable urethane (meth)acrylate or process as claimed in any one of the above claims, wherein the epoxide compound (G) is bisphenol A diglycidyl ether, 1,4-butanediol diglycidyl ether, trimethylolpropane triglycidyl ether or pentaerythritol tetraglycidyl ether.

7. A radiation-curable urethane (meth)acrylate or process as claimed in any one of the above claims, wherein the polyisocyanate (J) is 2,4- or 2,6-tolylene diisocyanate or an isomer mixture thereof, hexamethylene diisocyanate, 1,3-bis(isocyanatomethyl)cyclohexane, iso-

phorone diisocyanate or di(isocyanatocyclohexyl)methane.

8. A radiation-curable urethane (meth)acrylate or process as claimed in any one of the above claims, wherein the hydroxyalkyl (meth)acrylate (K) is 2-hydroxyethyl acrylate or 2-hydroxyethyl methacrylate.

9. A radiation-curable coating composition comprising a radiation-curable urethane (meth)acrylate as claimed in any one of the above claims.

10. Use of a coating composition as claimed in claim 9 as an interior wood-coating material.